Longview Energy Development
Contribution to Regional Haze

The contribution of the Longview Energy Facility to regional air quality impacts with the BPA Service Area was assessed using the results of the Regional Air Quality Modeling Study. This study examined potential air quality impacts associated with recently proposed power projects in the Service Area. The Regional Air Quality Modeling Study suggests the proposed power projects including the Longview Energy Facility would probably not significantly contribute to sulfur and nitrogen deposition in Class I areas, the Class I PSD Increments, regional Class II PSD Increments or regional concentrations in excess of the National Ambient Air Quality Standards. The model simulations did suggest the proliferation of proposed projects in the Service Area could potentially degrade visibility within Class I and Scenic Areas should all the projects become operational.

A modeling analysis was conducted to examine the Longview Energy Facility's contribution to the overall regional haze impacts predicted for the 28 power projects with an Energization Date prior to January 2004. Maximum 24-hour extinction coefficients predicted for the Longview Energy Facility for gas and oil firing are displayed in Figure 1 and Figure 2, respectively. Note the simulations assume oil firing could occur for any day of the year and likely over estimate actual impacts from the facility. The higher 24-hour extinction coefficients are predicted relatively close to the location of the proposed facility, extending northward towards the Puget Sound, eastwards toward the Columbia River Gorge National Scenic Area (CRGNSA), and west out the mouth of the Columbia River.

The maximum extinction coefficients for the oil-fired scenario are about twice those of the gas-fired case due primarily to an increase in PM10 and NOx emissions. The Longview Energy Facility would use very low sulfur fuel oil (0.0015 percent by weight) as a secondary fuel and the potential impacts of the plant are reduced considerably during oil firing due to the use of this fuel.

Table 1 and Table 2 summarize potential changes to background extinction due to emissions from the Longview Energy Facility based on gas and oil firing scenarios, respectively. Aerosol concentrations used for background extinction are based on monitoring data from the days with the best visibility, average of the top five percent and top twenty percent for the Class I Areas and CRGNSA, respectively. When fired by the primary fuel, the modeling suggests the proposed facility would potentially increase daily background extinction by up to 1.14 percent in the CRGNSA and would contribute greater than 0.4 percent on ten days when the combined group's contribution is greater than five percent. Predicted changes to background extinction in the CRGNSA and Class I areas are higher for the oil-fired case, but the number of days with contributions above 0.4 percent only increased slightly.

Table 1. Contribution of Longview Energy to Regional Haze in Class I Areas and the Columbia River Gorge National Scenic Area – Natural Gas Firing

Area of Interest	Longview Energy Maximum Extinction (1/Mm)	Maximum Change to Background Extinction (%)	Number of Days When Longview Energy Contribution > 0.4%	
			And Cumulative Change to Extinction > 5.0%	And Cumulative Change to Extinction > 10.0%
Mt. Hood Wilderness	0.14	0.71	1	0
CRGNSA	0.33	1.14	10	0
Mt. Adams Wilderness	0.06	0.35	0	0
Goat Rocks Wilderness	0.06	0.36	0	0
Mt. Rainier National Park	0.14	0.96	0	0
Olympic National Park	0.11	0.53	1	0
Alpine Lakes Wilderness	0.14	0.67	1	0

Notes:

Peak 24-hour gas-fired emissions were assumed for all days of the year.

Predictions are from CALPUFF simulations of April 1, 1998 to March 15, 1999. Background extinction coefficients are based on aerosol concentrations during days with the top five percent best visibility for all areas except the CRGNSA. The CRGNSA background extinction is based on the average for the top twenty percent.

Cumulative predictions include emissions from proposed power projects fired by their primary fuel with an Energization Date prior to January 2004.

Table 2. Contribution of Longview Energy to Regional Haze in Class I Areas and the Columbia River Gorge National Scenic Area – Oil Firing

Area of Interest	Longview Energy Maximum Extinction (1/Mm)	Maximum Change to Background Extinction (%)	Number of Days When Longview Energy Contribution > 0.4%	
			And Cumulative Change to Extinction > 5.0%	And Cumulative Change to Extinction > 10.0%
Mt. Hood Wilderness	0.27	1.40	2	0
CRGNSA	0.65	2.24	12	0
Mt. Adams Wilderness	0.12	0.69	0	0
Goat Rocks Wilderness	0.11	0.67	0	0
Mt. Rainier National Park	0.27	1.84	1	0
Olympic National Park	0.23	1.10	1	0
Alpine Lakes Wilderness	0.31	1.48	2	1 (*)

Notes:

Peak 24-hour oil-fired emissions were assumed for all days of the year.

Predictions are from CALPUFF simulations of April 1, 1998 to March 15, 1999. Background extinction coefficients are based on aerosol concentrations during days with the top five percent best visibility for all areas except the CRGNSA. The CRGNSA background extinction is based on the average for the top twenty percent.

Cumulative predictions include emissions from proposed power projects fired by their primary fuel with an Energization date prior to January 2004.

(*) The Longview Energy Facility's contribution was 0.47%.

Figure 1. 24-hr Max Extinction Coefficient (1/Mm), Longview Energy Project
April 1998 - March 15, 1999 Meteorology

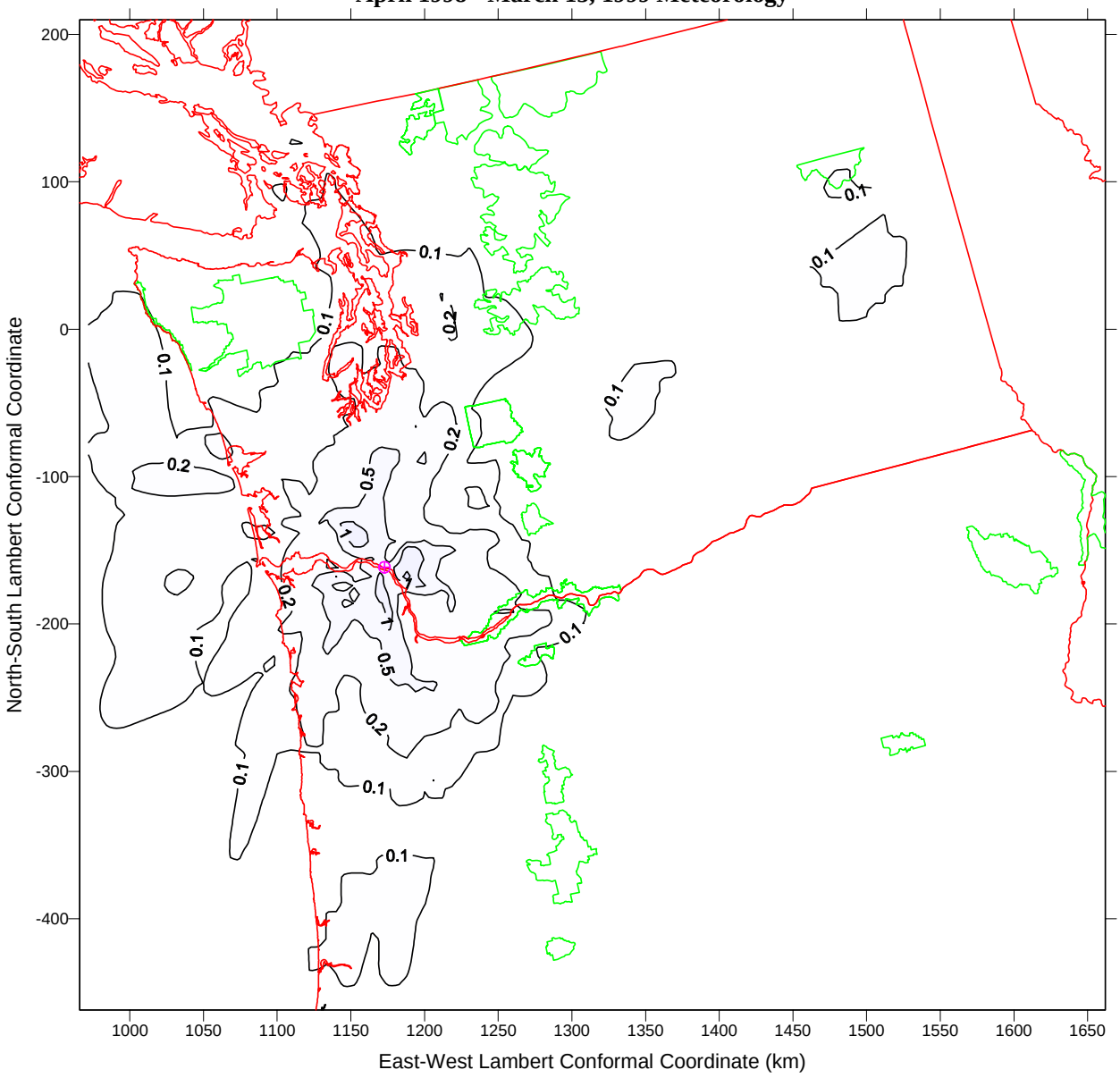

Figure 2. 24-hr Max Extinction Coefficient (1/Mm), Longview Energy Project (Oil-Fired)
April 1998 - March 15, 1999 Meteorology